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GREAT LAKES

FOCUS

On Water Quality

International Joint Commission — Windsor, Ontario

Editor: Patricia Bonner

VOLUME 4 ISSUE 1

MAY 1978

IJC HAS NEW UNITED STATES CHAIRMAN

On April 27, Robert J. Sugarman was sworn in as a new Commissioner of the International Joint Commission. He has succeeded Henry P. Smith, III, as Chairman of the United States Section, following Mr. Smith's recent resignation.

Mr. Sugarman is a graduate of Harvard Law School, Stanford University (History) and Brown University (Classics). He is a partner in the Philadelphia law firm of Dechert, Price and Rhodes and on the Legal Advisory Committee of the Environmental Defense Fund.

He was a legal consultant to the National Water Quality Commission during 1975-76 and has been active in both professional and civic groups. Mr. Sugarman lectures in the fields of planning, environmental law and its relationships to economics, business and development, as well as in citizen participation. His publications are numerous and treat many aspects of the law.

Mr. Sugarman and Canadian IJC Chairman Maxwell Cohen will preside over sessions of the IJC's Annual Meeting of its Great Lakes Water Quality Agreement organizations during the week of July 17-20, 1978, in Windsor.



Robert J. Sugarman taking his oath of office.

IJC's AGREEMENT WEEK PLANS

All sessions during Agreement Week in Windsor will be held at Cleary Auditorium. Anyone may attend these open meetings.

July 17

Presentation of the Final Report of the Reference Group on Pollution from Land Use Activities:
9:30 a.m. — 12:30 and 2:00 p.m. — 5: p.m.

Continued on Page 2

Have You Returned The Form From *FOCUS* 3 — Issue 4?

If you have not and wish to continue receiving the newsletter, this is your reminder. The new distribution list will be used beginning with the July 1978 issue. Please check your label to be certain the mailing address is correct and complete. There are only 4 lines on the mailing label, so be sure the information you wish to have added to your address will fit into the limited space, or abbreviate as necessary. Responses to the *Focus* survey form have been helpful. Some articles have been contributed or requested as a result of readers' suggestions. If you no longer have your last issue of *Focus*, use the back of this issue, near the label, indicate any changes to your address, and return it to the Windsor office. If you would like a copy of the full *Focus* survey form, write to the Editor.

July 18

Open News Conference with the Chairmen of Great Lakes Research Advisory Board, Great Lakes Water Quality Board and Pollution from Land Use Activities Reference Group: 9:00 a.m. — 11:00 a.m.

July 19

Presentation of the Annual Report of the Great Lakes Water Quality Board: 9:00 a.m. — 12:30 p.m. and 2:00 p.m. — 5:00 p.m.

July 20

Presentation of the Annual Report of the Great Lakes Research Advisory Board: 9:00 a.m. — 12:30 p.m. and 2:00 p.m. — 3:00 p.m.

IJC News Conference: 3:00 p.m. — 5:00 p.m.

OBJECTIVES HEARING — JULY 21

On July 21, the Commission will end the week with a public hearing on twelve proposed new and revised water quality objectives: iron, copper, silver, nickel, mirex, guthion, parathion, cyanide, ammonia, hydrogen sulfide, chlorine and temperature.

For more information, write to: Patricia Bonner, International Joint Commission, Great Lakes Regional Office, 100 Ouellette Avenue, Windsor, Ontario N9A 6T3 or telephone, in Canada, (519) 256-7821; in the United States, (313) 963-9041.

PEOPLE

Effective April 1, Brigadier General *Donald G. Weinert* is North Central Division Engineer, Corps of Engineers, Chicago.

* * * * *

George McCague was recently named Ontario's Environment Minister, replacing *George Kerr* who was named Solicitor General.

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George Reed Alexander, Jr. has resigned as Administrator of EPA, Region V, effective during May, 1978. Mr. Alexander has also served as the U.S. Chairman of the Great Lakes Water Quality Board during the past two years.

* * * * *

Steven Yaksich has been named to head the Lake Erie Wastewater Management Project of the U.S. Army Corps of Engineers, Buffalo District, replacing *Angelo Coniglio*. Dr. Yaksich has been associated with that project nearly since it began and has been a technical advisor to PLUARG.

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The IJC has appointed *Michael P. Mauzy* to the Great Lakes Water Quality Board. He recently

assumed the position of Acting Director of the Illinois Environmental Protection Agency.

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Richard H. Millest, former member of the Great Lakes Water Quality Board representing the Inland Waters Directorate of the Department of Fisheries and Environment, joined the IJC Ottawa staff as Assistant to the Chairman of the Canadian Section.

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Daniel H.A. Bondy has joined the IJC staff in Windsor as a physical scientist. He will add geographer expertise to the multi-disciplinary staff.

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Lee Botts became official Great Lakes Basin Commission Chairman when President Jimmy Carter announced her appointment February 23, 1978.



Lee Botts

"ENVIRONMENTAL PROBLEMS ARE INCREASING"

That is what residents of St. Lawrence, Jefferson, Oswego and Cayuga counties (New York) told the St. Lawrence-Eastern Ontario Commission when surveyed during the summer of 1976. People pointed to water pollution and aquatic weed growth as the most serious environmental problems.

The purpose of the survey was to determine the characteristics, attitudes and perceptions of the resource users in the St. Lawrence-Eastern Ontario area regarding recreational activity, environmental and non-environmental problems, socio-economic data, and natural resource and land use management.

The report of the survey of 1100 permanent and seasonal homeowners in the area recently was published. About two-thirds of those sent the survey responded. In addition over 400 recreational users

were interviewed at the state parks, private campgrounds and boat launch sites.

Despite that fact that a majority of permanent and seasonal residents responding (56 and 84 percent, respectively) felt environmental conditions were changing for the worse, a majority said governmental management of natural resources should remain the same. Forty-two percent of the permanent residents and 54 percent of the seasonal residents responding believed that responsibility for natural resource management should be at the state level, rather than county or municipal. Over half of both the permanent and seasonal residents surveyed said that local land use regulation should remain the same.

Overall, 64 percent of the permanent residents responding said their local governments were adequately concerned with their problems. In contrast, fifty-seven percent of the seasonal residents held the opposite view.

The Commission report, titled "Characteristics, Perceptions and Attitudes of Resource Users in the St. Lawrence-Eastern Ontario Commission's Service Area", has been distributed to public and college libraries and interlibrary loan systems in the tri-county region for public use.

PLUARG PANELS MEET AGAIN

A Fourth Round of PLUARG Panels' meetings has been scheduled. All 17 of the meetings are not listed below because some of them will have already occurred by the time you receive your *Focus* copy. Meetings in London, St. Catharines, Kitchener/Waterloo, Owen Sound, Toronto, Kingston and Sudbury will have passed. Depending on the speed of the mail, other meetings may also have been held. Check the schedule below. If you would like to hear about a meeting you missed or cannot attend, write or telephone the Great Lakes Regional Office in Windsor (Canada: (519) 256-7821; United States: (313) 963-9041; address on back page.)

All meetings are open to anyone wishing to attend. At each session, the PLUARG member who has been working with the individual panel will go through PLUARG's draft final report to the IJC. He will talk about the recommendations and explain how and why the PLUARG recommendations do or do not reflect the panel's recommendations to PLUARG.

CANADA

Thunder Bay, ON
Barcelona Room
Airlane Motor Hotel
698 W. Arthur Street

Wednesday, May 3, 1978
10 a.m. - 5 p.m.

UNITED STATES

Gary, IN
Indiana University Northwest
3400 Broadway

Monday, May 8, 1978
9 a.m. - 5 p.m.

Cleveland, OH NASA-Lewis Research Center 2100 Brookpark Rd.	Tuesday, May 9, 1978 9 a.m. - 5 p.m.
Rochester, NY Federal Building, Rm. 402 100 State Street	Wednesday, May 10, 1978 9 a.m. - 5 p.m.
Erie, PA Homebuilder's Assoc. 1557 W. 26th Street	Thursday, May 11, 1978 9 a.m. - 5 p.m.
East Lansing, MI SCS—Manley Miles Bldg. 1405 So. Harrison	Monday, May 15, 1978 9 a.m. - 5 p.m.
Chicago, IL Federal Building US-EPA 12th Fl., 230 S. Dearborn St.	Tuesday, May 16, 1978 9 a.m. - 5 p.m.
Manitowoc, WI County Office Building	Wednesday, May 17, 1978 9 a.m. - 5 p.m.
Duluth, MN University of Minnesota	Friday, May 19, 1978 9 a.m. - 5 p.m.
Traverse City, MI Holiday Inn 615 Grand View Pkwy	Monday, May 22, 1978 9 a.m. - 5 p.m.

RESEARCH CENTRE - UNIVERSITY OF TORONTO

by Tom Davey

On the shores of Lake Huron at Baie du Doré, across the bay from the Bruce Nuclear Power Station and Heavy Water Plant, is an unusual field research station run by the Institute for Environmental Studies at the University of Toronto.

The location is ideal for many types of study, including research associated with large fresh water bodies. Current and past research projects include decay rates of oil in water bodies; heavy metals, including mercury, in food chains; bass reproduction; and several programs related to temperature, climate and water.

Some notable experimental work was performed at Baie du Doré including many deep water research projects; underwater dye experiments photographed by scuba divers; turbulence and diffusion studies; hydrographic studies; phytoplankton distribution and bathythermograph surveys for temperature stratification.

The Baie du Doré research station began in 1961 when the Great Lakes Institute, then an independent organization within the University of Toronto, purchased a prefabricated cottage and erected it at Douglas Point.

Today the station is run by the Institute for Environmental Studies and has accommodation for some 40 people. All the buildings are now fully equipped for year-round use and provide a comfortable working environment for research groups and students.



Baie du Doré Laboratory from the docks



Residential building

Docking facilities have been gradually improved and now comprise some 400 ft. of sheltered mooring. Additionally, there are several laboratory facilities — plus a classroom and recreation hall.

Numerous workboats are available to researchers at Baie du Doré during the summer. On land there are many facilities, including a temperature-controlled artificial stream for fisheries research and an experimental pond with a sliding roof giving weather protection if required.

Not all the research is necessarily connected with waterways. As Baie du Doré now comprises some 26 acres, it is ideal for research into flora and fauna species, and, in fact, some 36 species of birds have been observed and recorded in the area.

The facilities are not confined to University of Toronto groups. They are used annually by staff and student groups from many other Ontario universities and high schools.

The Institute for Environmental Studies and the School for Continuing Studies have developed a program to assist science teachers in increasing their knowledge in environmental studies. This course has two sections; an intensive weekend in which three types of aquatic habitat will be studied; and a week-long course involving field trips, lectures and laboratory work. The weekend session will be held Friday June 2 to June 4 and the week-long session runs July 9 to July 14. Tuition fee for the two-part course is \$150. The entire course provides 56 hours of supervised instruction, laboratory and project related work and has been granted one third credit

certification by the Ontario Secondary School Teachers Federation. Further details are available from the University of Toronto School of Continuing Studies, 158 St. George St., Toronto, Ontario M5S 2V8. Phone (416) 978-2400.

Tom Davey is Communications Consultant for the Institute for Environmental Studies, University of Toronto.

PLUARG PANELS

by Sally Leppard,
Canadian PLUARG Public Participation Coordinator

Early last fall the IJC's biggest experiment in public participation began (see *Focus* Vol. 3, Issue 2, for introduction to program). The Commission has expanded its information/participation efforts gradually over the last several years, attempting to reach more people and providing increasingly greater opportunity to the public to make their ideas known to the Commission. These efforts culminated in the Pollution from Land Use Activities Reference Group's (PLUARG) panel consultation process.

For the past six months 17 citizen panels have been studying the research undertaken by the PLUARG. Panels submitted their reports, complete with recommendations, to PLUARG in January and discussed them at a meeting held in Windsor in February. PLUARG has been reviewing the individual reports and considering recommendations for inclusion in its report to the International Joint Commission (IJC) in July, 1978.

Prior to the presentation in Windsor, representatives from each of the panels (8 Ontario and 9 United States panels) met to formulate a set of international recommendations for delivery to PLUARG. Throughout their deliberations, the chairmen identified a common thread, the critical need for broad-based environmental educational programs in all levels of schools as well the need to educate planners, civil servants, implementors and elected officials.

Highlights:

Canadian panels identified the need for:

A broad-based education program in all levels of schools.

An international information clearing house.

Streamlining and enforcement of existing legislation.

Public funding and class actions in environmental litigation.

Public incentives to repair existing pollution situations.

Adoption of a "Conserver Society" ethic.

Uniformity of any efforts enacted by the governments on both sides of the border.

U.S. panelists' ideas are similar. They saw a need for:

Education of many "publics", including planners, civil servants, implementors, elected officials.

An international information clearing house.

Environmental ombudsmen at county levels.

Tax incentives or grants at the local level.

Emphasis on prevention of further toxic contamination, not remedies after contamination.

The U.S. chairmen believe that water quality standards are necessary, must be enforced and should be periodically reviewed. Further they recommend that federal agencies should set overall policy, states provide planning for implementation, and local government implement land use remedial measures.

Follow-up

The 17 citizen panels have been requested to review and comment on the PLUARG draft final report before it is finalized for presentation to the IJC. At that time, panelists will have the opportunity to contribute their thinking to the report. Panelists' comments on the report will be considered when the final draft of the PLUARG report to the Commission is prepared.

Dr. Murray Johnson, Canadian Chairman of the Reference Group and Director General for the Ontario Region, Fisheries and Marine Service, of the Department of Fisheries and the Environment commented "There is no doubt that the panel reports will have a significant impact on PLUARG's final recommendations. When we go back to the public with our draft report we will explain any differences there might be."

The PLUARG's \$20 million study, commenced in 1972 after a series of public hearings were held to receive citizen help in designing the program. There was originally no provision for involving the public during the course of the study, only provision for the usual IJC hearings on the final report. During the studies PLUARG members recognized how far-reaching their final recommendations could potentially be. They therefore asked that IJC consider having public involvement during the study. The Commission approved the concept and the consultation program began. There is no question that IJC enabled PLUARG to set a precedent by bringing the public in to comment before drafting a final report to the Commission.

The formal consultation program is about over, but an intensive PLUARG public education campaign is currently underway. It will be followed by a campaign to familiarize Great Lakes Basin residents with the contents of PLUARG's report in order to

encourage participation in IJC's hearing in November 1978. *Focus* readers who would like more details of the PLUARG involvement program should write to or telephone: Public Information Officer, Great Lakes Regional Office, International Joint Commission, 100 Ouellette Avenue, 8th Floor, Windsor, Ontario N9A 6T3 (519) 256-7821 or (313) 963-9041.

GREAT LAKES RESEARCH

NOAA, the National Oceanic and Atmospheric Administration, will be designated as the "lead" agency for the United States federal ocean pollution research program if S. 1617, the National Ocean Pollution Research and Development and Monitoring Act, is passed. The Great Lakes are considered part of the "ocean" program.

In summary, the bill calls for:

(1) the establishment of a comprehensive 5-year plan for federal ocean pollution research and development and monitoring programs in order to provide planning for, coordination of, and dissemination of information with respect to such programs within the federal government;

(2) the development of the necessary base of information to support, and to provide for, the rational, efficient, and equitable utilization, conservation, and development of ocean and coastal resources; and

(3) the designation of the National Oceanic and Atmospheric Administration as the lead federal agency for preparing the plan referred to in paragraph (1) and to require the Administration to carry out a comprehensive program of ocean pollution research and development and monitoring under the plan.

The term "ocean pollution" is defined as any short-term or long-term change in the marine environment. The term "marine environment" is the coastal zone as defined in Section 301(1) of the Coastal Zone Management Act of 1972. It includes the Great Lakes water to the international boundary between the United States and Canada.

The required 5-year plan is to contain:

(1) an assessment and ordering of national needs and problems;

(2) a listing of existing federal programs including a catalog of personnel, facilities, vessels, and equipment; a description of existing goals and costs; and an analysis of usefulness of such programs in meeting national goals;

(3) policy recommendations for changes in programs, goals, funding, interagency cooperation, and suggested legislation to establish new federal programs required to meet priorities;

(4) budget review to ensure interagency cooperation in carrying out the programs and to eliminate unnecessary duplication of effort.

Other provisions of the Act authorize NOAA to establish its own comprehensive ocean pollution research and development and monitoring program, to provide research grants or contracts, and to disseminate information on the results of these programs. The Act authorizes an appropriation of \$5 million for Fiscal Year 1979.

ENVIRONMENTAL PROTECTION AND THE STATE ATTORNEY GENERAL

by William N. Thompson and Bradley F. Smith

In the environmental arena, many people are responsible for designing, interpreting, and implementing policy. One political figure is often overlooked in analysis of environmental policy. Yet that person can stand at the center of several forces, as a catalyst in the movement for cleaner waters, skies, and land. That individual is the American state attorney general.

Roles

The American state attorney general serves roles that can be categorized as legislative, executive, and judicial. Moreover, attorneys general in all the Great Lakes States except Pennsylvania are independently elected officials. As such, they have a responsibility to represent the public as a whole as well as represent the government. Some recent state attorneys general include Walter Mondale (Minnesota), Jacob Javits (New York), William Saxbe (Ohio) and Edward Brooke (Massachusetts).

Legislative roles of the attorneys general include preparing legislation of interest to the attorney general, drafting bills desired by departments responsible for natural resources management, and reviewing bills legislators submit for consideration. Further, they can testify upon constitutional and legal implications of bills. In some states the attorneys general must certify bills as constitutional before they become law.

Executive roles include giving daily legal counsel for governors and state agencies. Typically, attorneys general draft administrative rules for agencies and conduct negotiations between agencies and private parties regulated by the rules. The attorneys general issue public information reports on environmental matters which can precipitate environmental standards enforcement activities. The attorney general also manages staffs of environmental attorneys and budgets financial allocations for their work.

Judicial roles include initiating litigation for themselves, for agencies, or in the public interest. Attorneys general may file *amicus curiae* briefs supporting litigation brought by other governments or by environmental groups. They also issue official legal opinions. These official opinions are invariably public, may be issued without request or consultations with other public officials, and may carry the force of law until overruled in actual court cases. State attorneys general's opinions on environmental subjects can also be important because they help public officials to understand the complex array of federal, state, and local laws and ordinances regarding the environment.

Application to Great Lakes Water Quality

State attorneys general have utilized the three roles to improve water quality in the Great Lakes. For example, with the help of attorneys general, many states have drafted general statutes which give specific recognition to common law powers of attorneys general to intervene on behalf of the public when pollution constitutes a public nuisance.

Michigan has instituted a "Turn in the Polluter" campaign to promote enforcement of environmental quality controls on parties who have polluted lakes within and surrounding the state. Likewise, the public intervenors office, which acts as an ombudsman and is attached to the Wisconsin attorney general's office, has facilitated action against Great Lakes polluters in Wisconsin.

In the judicial arena, state attorneys general have taken some notable actions. The offices in Michigan, Wisconsin, and Minnesota joined together with the United States Environmental Protection Agency and environmental interest groups to sue Reserve Mining Company of Minnesota to stop dumping taconite tailings and the associated asbestiform fibres in Lake Superior waters. The case of *Ohio v. Wyandotte Chemical* found Ohio attorney general William Brown using courts to stop mercury pollution in Lake Erie. Michigan attorney general Frank Kelley filed an *amicus curiae* brief in favor of Brown in the case. Brown in turn filed a supportive brief along with New York attorney general Louis Leftkowitz in Frank Kelley's actions against the Lake Carriers' Association. These actions led to a United States Supreme Court ruling upholding enforcement of state water quality statutes against interstate users of the Great Lakes.

In 1969 Frank Kelley issued an opinion which will have a continuing impact in preserving the water quality of the Great Lakes: that Article 4, Section 52, of the Michigan Constitution of 1963 declared that the state's public policy is that the air, water, and other natural resources of the state

are to be protected from pollution, impairment and destruction and to this extent it prohibits the legislature from enacting any law which would violate the constitutionally declared public policy. The opinion also maintained that copper and iron mining operations are subject to the protective provisions of the Water Resources Act and that the Water Resources Commission is not authorized to issue an order allowing destruction of fish and game habitat.

A Concluding Note on the Great Lakes

The problems of environmental decay can be solved only by the concerted efforts of many people. Sustained action by both private citizens and public officials is vital. Private citizens are aligned in a myriad of crucial interest groups and also behind individual leaders in the fight. The officials who must lend positive action to the fight are found at all levels and in all branches of government.

One official, the state attorney general, has a substantial current and potential role as a change agent — as a mover of others — in the policy arena of pollution abatement. The state attorney general can stimulate private citizens to bring complaints to courts and help ensure that legislators, other public officials and regulators fully carry out their roles in pollution abatement.

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William N. Thompson, Ph.D., is Associate Professor of Political Science, Western Michigan University. Bradley F. Smith, Ph.D., is Assistant Professor of Political Science, Delta College.

Thompson and Smith are the joint authors of *State Attorneys General and the Environment* (Kalamazoo: New Issues Press, Western Michigan University, 1975).

Editor's Note: This is an unsolicited article which, with apologies to the authors, has been shortened for *Focus* use. The concept of the "attorney general as environmental activist" seemed potentially useful to you the readers.

ASBESTOS MEASUREMENT IN WATER

An 11-member committee of government and university scientists has published a recommended procedure for the measurement of waterborne asbestos.

The Committee, representing the Ministry of the Environment, the Ontario Research Foundation, Health and Welfare Canada, Environment Canada, and McMaster and Lakehead Universities, was established in 1976 by the OMOE to help settle difficulties arising from the use of different laboratory procedures.

"Until now there has been no widely-agreed-upon methodology for asbestos levels in the aquatic environment," said Gerry Ronan, director of the OMOE laboratory services branch. "This has led to considerable confusion as different environmental labs would report widely varying levels of asbestos in the same study areas."

Committee chairman, Art Rayner, of the Ministry of the Environment said a similar analytical procedure has also recently been proposed by the Environmental Protection Agency in the United States where, like Canada, the impact of waterborne asbestos is being closely studied. The new method is currently being used in a survey of asbestos in Ontario water supplies.

At present, asbestos level guidelines apply only to air.

The Committee report, "An Interim Method for the Determination of Asbestos Fibre Concentrations in Water by Transmission Electron Microscopy" outlines sample preparation and the criteria used for fibre enumeration and identification by electron microscopy.

A second Committee report on optimum methodology for measuring levels of asbestos in air is expected later this year.

In its Fourth Annual Report on Great Lakes Water Quality, responding to a Research Advisory Board report, *Asbestos in the Great Lakes Basin*, the IJC stated "...it is clear that existing sampling, analytical and monitoring techniques and programs are limited..." Further, the Commission recommended that "The Federal Governments formalize current informal practices by setting up a joint task force for the purpose of coordinating the investigation of sampling and analytical problems... from asbestiform fibres; also the extension of existing monitoring programs be limited until sampling and analytical techniques are more reliable and can be integrated."

GREAT LAKES BEACHED BIRD SURVEY

by Chris Risley

If you like to walk beaches and identify birds, you can do both and help the Great Lakes Beach Bird Survey. Sponsored by the Long Point Bird Observatory, the survey will monitor Great Lakes bird mortality using information collected by volunteers on monthly beach walks. It is the first such survey for an inland lake region, and should provide many interesting insights into bird life (and death) on the Great Lakes.

The project is designed to help us learn about the effect of pollutants on birds, and more importantly,

will compile long-term records on natural bird mortality. This information will help us learn about the causes, seasonal changes and location of bird die-offs, and allow us to make mortality comparisons between lakes and between years. It will also document occurrences of uncommon species like jaegers, seaducks or other pelagics on the lakes.

Participants are needed on the Canadian and American shores of all five of the Great Lakes and on Lake St. Clair. You should have a basic knowledge of bird identification and be willing to walk a one or two mile stretch of beach of your own choice, once a month. On the way, you will count, identify, age (where possible) and record on the forms provided, all the dead or dying birds encountered. Commitment to walk a beach each month for a year is preferred, so that long-term data can be collected, but you don't have to do the walk when the lake is frozen, and the monthly dates can be varied somewhat. Results from the survey will be published in an annual report to be sent to all participants in the program.

Now is the time to register for the 1978 survey. Thirty different beaches are currently being walked and many more walkers are needed, particularly on Lakes Huron, Michigan, Superior and St. Clair. Individuals or club groups are welcome to participate. If you are interested in taking part, write to Chris Risley, Great Lakes Beached Bird Survey, Long Point Bird Observatory, P.O. Box 160, Port Rowan, Ontario N0E 1M0, Canada.



Looking for beached birds.

MUNICIPAL WASTEWATER TREATMENT PLANTS OPERATION AND MAINTENANCE WORKSHOP

by John Convery

A 1976 Summary¹ of three annual EPA Surveys of municipal wastewater treatment facilities indicated that only 48% of the facilities met their design objectives and the secondary treatment ob-

jective of 30 mg/l for both BOD and suspended solids concentrations. Identification of the reasons for, and potential ways to improve, this level of plant performance was the subject of a workshop held in Chicago on March 15 - 17, 1978. The Great Lakes Workshop: Improving Operation and Maintenance of Municipal Treatment Plants was jointly sponsored by the Great Lakes National Program Office of EPA Region V, and the Review Board of the Canada/Ontario Agreement on Great Lakes Water Quality.

Sixty invitees, representing disciplines or responsibilities essential for the proper operation of treatment facilities, attended. Constituencies represented included design engineers, equipment manufacturers, plant operators and managers, municipal decision makers, State/Provincial and Federal regulatory authorities, and public sector interest. Invited papers on relevant topics, including results of a 3-1/2 year U.S. National Operation and Maintenance (O & M) Cause and Effect Survey², were presented in the first session. The attendees assembled in working groups during the remaining two days, identified the most significant problems and proposed alternative solutions. Multiple problem statements were synthesized into the following areas of deficiency.

- Public awareness and support of proper operations and maintenance. Adequacy of O & M budget levels.

- Number and technical capability of operators, equipment representatives and regulatory review authorities.

- Maintenance plans.

- Regulations relating to permit requirements and equipment selection procedures.

- Design considerations related to operational and maintenance reliability.

- Accountability among the constituents with regard to long-term operability.

The O & M "problem" includes a spectrum of sub-issues which vary in severity and applicability among wastewater treatment facilities. A remedial program must, therefore, include some plant specific components in addition to approaches having general applicability. This complexity was recognized and addressed in the solutions prepared by the workshop participants. Many alternative solutions were discussed with the following preferred solutions identified.

- Federally fund, on a one-time basis, operation and maintenance improvement grants. The purpose of these grants would be to independently establish a comprehensive correction program including preparation of an O & M manual, cost-accounting procedures, preventative maintenance

plans, staffing recommendations, and specific training requirements emphasizing on-site training.

- Require mandatory operator certification.
- Incorporate independent review of facility designs in terms of operational, maintenance and reliability considerations.
- Incorporate in future wage negotiations incentive pay schedules for operators based on permit compliance monitoring.
- Publicize locally the cost-effectiveness of O & M expenditures in improving water quality.
- Provide greater emphasis in equipment specification and procurement processes to insure, even at higher initial capital cost, more reliable equipment.
- Redirect research emphasis from new process development to operations and maintenance consideration of existing technology.

Proceedings of the Workshop will be available through the Great Lakes National Program Office, EPA, Region V, 536 South Clark Street, Chicago, Illinois 60605.

* * * * *

Mr. Convery is Director of Wastewater Research Division of EPA's Municipal Environmental Research Laboratory in Cincinnati, Ohio. He serves on the Great Lakes Research Advisory Board and was a member of its former Water and Wastewater Treatment Committee, the group which originally proposed such an international workshop in 1976.

Editor's Note: Mr. Convery presents a U.S. reading of the workshop results. Because of differences in federal/provincial/ state responsibilities, implementation of such recommendations will also differ.

1. Gilbert, W.G., "Relation of Operation and Maintenance to Treatment Plant Efficiency," *Jour. Water Poll. Cont. Fed.*, 48, 1822. (1976).
2. Hegg, B.A., et al., "Evaluation of Operation and Maintenance Factors Limiting Municipal Wastewater Treatment Plant Performance," U.S. EPA (Contract No. 68-03-2774). In press.

MORE ON TOXIC POLLUTANTS

Under the amended Federal Water Pollution Control Act, the Environmental Protection Agency (EPA) has published a formal list of sixty-five toxic pollutants that will serve as the basis for developing effluent limitations. The Clean Water Act, as it is now called, permits EPA to add or remove pollutants depending on toxicity, persistence, degradability, "usual or potential presence of the affected organisms in any waters," importance of the affected organisms and the nature and extent of the effect of the toxin on those organisms.

The major compound classes represented within the list are: halogenated hydrocarbons, ethers and phenols, polynuclear aromatics, nitrophenols, and heavy metals.

For a copy of the list write to: Kenneth M. Mackenthun, Director, Criteria and Standard Division (WH-585), 401 M St., S.W., Washington, D.C. 20460 (*Water newsletter*, Water Information Center, February 24).

BRIEFS

According to the annual report of the Council on Environmental Quality (CEQ), the nation spent about \$187 for every man, woman and child in the U.S. to combat pollution last year.

The total cost was estimated at \$40.6 billion for pollution control, of which industry spent about 50 percent, government 30 percent, and consumers about 20 percent in direct costs. Of the total, less than half — or \$18.1 billion — resulted from environmental legislation. The remainder would have been spent anyway.

About 38 percent went to water pollution control, 23 percent for solid waste management, 32 percent for air pollution abatement and the remaining 7 percent went for administrative costs.

Pollution abatement accounted for about 2.1 percent of the gross national product in 1977, an increase of 0.34 percent since 1973.

* * * * *

Ontario met only one percent of its annual natural gas consumption of 840 billion cubic feet with the gas produced from its wells in Lake Erie. About 370 wells are now producing. Last year 5.9 billion cubic feet were produced from Lake Erie wells; that is 70 percent of Ontario's total production 8.4 billion cubic feet. (*Great Lakes Newsletter* — March 1978).

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Cholestyramine was used to eliminate Kepone from the bodies of workers who had been exposed to that substance in the Hopewell, Virginia incident. Twenty-two workers who were involved in the successful experiment now exhibit little of the symptoms of acute Kepone poisoning. The drug may have uses for treating PCBs, mirex, dieldrin and PBBs. The study conducted by researchers at the Medical College of Virginia (Richmond) was reported in *Chemical Week*, February 8.

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Erie, Pennsylvania, Harbor will have a diked disposal facility, Colonel Daniel D. Ludwig, district engineer, Buffalo District, U.S. Army Corps announced March 24. The polluted material dredged from the harbor navigation channels will be contained in the facility when it is completed in the fall of 1979.

The facility will be constructed on the south side of the south pier at the entrance to Erie Harbor. Two rubblemound dikes, both 900 feet long, will inclose an area between the south pier and the shoreline. The portion of the pier that will form part of the disposal facility will be reinforced with steel sheet piling.

The 1970 River and Harbor Act (PL 91-611) authorized the construction of contained disposal areas for dredged material at harbors where the U.S. Environmental Protection Agency (EPA) considers the dredged material to be polluted and likely to further degrade the water quality of the lakes if the practice of open lake disposal is continued. Under the legislation, non-federal interests are required to provide the site and pay 25% of the cost of construction. Erie was granted a waiver of the 25% local share upon the recommendation of EPA because it met the requirements for pollution abatement.

water management plans; 2. toxic and hazardous substances control programs and strategies; and, 3. water supply and conservation. One of the forums will be held in Chicago in conjunction with Lake Michigan Saving Days (June 4 - 6; contact Lake Michigan Federation, 53 Jackson, Chicago, IL 60604). The others are in Detroit, Marquette and Syracuse. Write to Al Beaupre, GLBC, P.O. Box 999, Ann Arbor, MI 48106.

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World Environment Day is June 5, the sixth anniversary of the United Nations Conference on the Human Environment. Everyone is urged to participate in or to help organize local observances of the day. It's a chance to reaffirm the Stockholm spirit of international cooperation to solve environmental problems. Contact the nearest EPA Regional public information office for more details. Share your ideas for events or find out what is planned to happen near you.

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From May 23 - 25 an International Symposium on the Analyses of Hydrocarbons and Halogenated Hydrocarbons will be held at McMaster University in Hamilton, Ontario. To inquire about registration, write to Dr. J. Lawrence, CCIW, P.O. Box 5050, Burlington, Ontario L7R 4A6.

EVENTS

International Perspectives on Watershed Conservation is the topic of the 25th annual National Watershed Congress to be held in Toronto, June 25-28 at the Hilton Harbour Castle Hotel. There is a \$15.00 registration fee. Please write to: National Watershed Congress, 1025 Vermont Avenue, N.W., No. 1105, Washington, D.C. 20005 or call (202) 347-5995 for additional information. Research Advisory Board member Edna Gardner is a member of the host committee.

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IJC's Water Quality Agreement week in Windsor will begin July 17 and continue through the 21st when Water Quality Objectives hearings will follow the reporting of Agreement institutions (See story page 1).

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The United States Great Lakes Basin Commission is sponsoring a series of four forums in June on their Great Lakes Basin Plan. The participants will be discussing the future of the Great Lakes and examining three key topics: 1. the sources of pollution, both point and non-point as they relate to present 208 planning and other

LAW AND THE COURTS

On March 21, U.S. District Judge John Feikens caused city, state and federal officials to set out and agree to a detailed work plan for meeting ordered deadlines for upgrading Detroit's sewage treatment plant. Further, through another plan, Detroit avoided threatened legal action if the city could not arrange an end to air pollution caused by the fourteen* incinerators burning sludge from the treatment plant. There are 68 compliance dates, each of which requires reporting; in addition on some of the reporting dates, more than one formal report is required. By December 31, 1979 secondary treatment must be in place and phosphorus must be reduced from the present 4 mg/l to 2.5 mg/l. By December 31, 1981 the requirements of 1 mg/l of phosphorus must be met. However, by mid-1978 Michigan officials expect that Detroit will closely approach the 2.5 mg/l because of the 0.5 percent phosphorus by weight content limitation in detergents.

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Once again, a bill (HR 8741) is before the United States House of Representatives to ban the sale of phosphate detergents in the Great Lakes

Basin. Michigan Congressman David Bonior introduced it. Congressman Harold T. Johnson of the Public Works and Transportation Committee (Ste 2165, Rayburn House Office Building, Washington, D.C. 20515) will be holding hearings.

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EPA is going to penalize chemical spillers who fail to notify the agency with civil penalties up to \$5 million, sentences up to one year in jail and recoverable cleanup costs up to \$50 million. If that threat is not enough, in cases of "willful negligence", the sky's the limit on liability for cleanup costs. Regulations could go into effect by mid-June, 1978.

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Did you know that there is a clause in one of the approved Panama Canal Treaties which commits the United States and Panama to implement the treaty "in a manner consistent with the protection of the natural environment through consultation and cooperation"? A Joint Environmental Commission would be created to monitor, study and make recommendations to the two Governments to avoid or mitigate adverse environmental impacts of activities under the treaty. (*World Environment Report*, February 13, 1978).

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Under Canada's Clean Air Act, maximum tolerable levels have been set for the five air contaminants which account for ninety percent of Canada's air pollution: particulates, sulfur dioxide, oxidants, nitrogen dioxide and carbon monoxide. For more details contact: R.J. Powell, Environment Canada, EPS-APCD, Regulations Development Division, Place Vincent Massey, Ottawa, Ontario K1A 1C8.

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As a preventive measure, Canada is banning all uses of polybrominated biphenyls (PBBs), a persistent chemical which can bioaccumulate in organisms. This action was taken as a result of a report, "Polybrominated Biphenyls in the Environment" (EPS-3-EC-77-18), to the joint Environment/Health and Welfare Environmental Contaminants Committee. The chemical has not been used in Canada since 1975 when PBBs were commercially used by a Cobourg, Ontario plant. Proposed regulations under the Environmental Contaminants Act were published in the *Canada Gazette*, Part 1, April 1.

A sixty-day waiting period is now underway, pending receipt of notices of objection. If no notices are received, the proposed regulation will be published in *Canada Gazette*, Part II. The date

on which the regulation goes into force will be published then. If any objections are made, they will go to a Board of Review for further action.

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In a 28-count indictment, Olin Corporation and several of its former employees were charged on March 23 by a federal grand jury of false reporting and conspiracy to defraud. Twenty of the charges are tied to falsely reporting to EPA the amount of mercury being discharged into the Niagara River at Niagara Falls, New York. The Plant's NPDES (National Pollutant Discharge Elimination System) permit limits mercury discharges to 0.2 pounds per day. Prior to the issuance of that permit, Olin had agreed, in 1970, to limit discharges to 0.5 pounds per day. Olin indicated to a newspaper that over the past seven years the discharge averaged 3.8 pounds per day or about 5 tons over the seven years. Olin informed the EPA and the New York Department of Environmental Conservation in July 1977 that it had found that reports had been falsified, launched its own investigation and moved to correct the problem. Olin pleaded innocent to the charges; though it accepted responsibility for the Niagara Falls plant's actions, it denied criminal responsibility for reports falsification.

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The Michigan Water Resources Commission and the state Department of Natural Resources recently approved a proposal to eliminate bacterial water quality requirements from National Pollutant Discharge Elimination System (NPDES) Permits during cold weather seasonal conditions. The bacterial standard is intended to protect total body contact recreational uses, but such uses are not made during cold weather months. Further it is desirable to reduce the use of chlorine in processes which result in the release of chlorine or compounds containing chlorine to the water. Individual permits proposed to be modified as a result of the requirements change will be subject to public notice and hearing.

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In February and March Michigan's Department of Public Health and Wisconsin's Department of Natural Resources, respectively, were granted primary enforcement responsibility for public water supplies under provisions of the U.S. Safe Drinking Water Act. Each met all conditions to assume that responsibility in that each state:

1. Has adopted drinking water regulations which are no less stringent than the National Interim Primary Drinking Water Regulations;
2. Has adopted and will implement adequate procedures for the enforcement of such State regulations, including adequate monitoring and inspections;

3. Will keep such records and make such reports as required;
4. Will issue variances and exemptions in accordance with the provisions of the National Interim Primary Drinking Water Regulations;
5. Has adopted and can implement an adequate plan for the provision of safe drinking water under emergency circumstances.

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Only farmers and commercial users who have been shown competent and certified to use the products safely will be able to use about 2,000 pesticide products, containing 23 potentially hazardous ingredients under new EPA restrictions. Such restriction is required by the 1972 Environmental Pesticide Control Act (Amendments to the Federal Insecticide, Fungicide and Rodenticide Act).

Tests or actual experience showed that the 23 ingredients might harm birds, fish and other wildlife or people if misused.

The ingredients are acrolein, acrylonitrile, aldicarb, alkyl alcohol, aluminum phosphide, azinphos methyl, calcium cyanide, demeton, endrin, ethyl parathion, fluoroacetamide, hydrocyanic acid, methomyl, methyl bromide, methyl parathion, mevinphos, paraquat, picloram, sodium cyanide, sodium fluoracetate, strychnine, sulfotepp, tepp.

In addition, EPA is considering limiting the use of 16 other ingredients: carbofuran, chlorfenvinphos, chlonitralid, dioxathion, diquat dibromide, disulfoton, endosulfan, endothall, EPN, ethoprop, fenamiphis, fensulfothion, fonofos, monocrotophos, phosphamidon and phosacetim. (*Environmental Health Letter*, March 1)

GETTING AT BARRIERS TO PUBLIC COMMUNICATION

by Marina L. Herman

Public involvement has been with us for a long time now. It has been mandated by legislation and government agencies and demanded by citizens throughout the United States and Canada. But as public hearings and information sessions continue to be scheduled, attendance at meetings is low and hard to get. To help get at this problem, a workshop was held in late February in northern Wisconsin to zero in on problems and solutions in making public presentations.

Some 37 participants attended the day-long training session. They represented a broad spectrum, including town officials, school board

members, university outreach staffs, and personnel from the U.S. Forest Service and the Wisconsin Department of Natural Resources. While their backgrounds were varied, their interests were the same: to gain knowledge of practical communication techniques which could be used in local meetings. The sessions included information on meeting agendas, the use of slide and overhead projection equipment, design and production of visuals to help carry a message, proper and effective use of the media and small group discussion techniques.

The first session dealt with increasing the effectiveness of public meetings. These tips were offered: the maximum length of a meeting is two hours — after that productivity drops and little happens; to involve your audience, bring them to the same level of knowledge and understanding; the physical setting of a room should invite discussion — not inhibit; everyone should have an opportunity to say, "this is how I see the problem", "this is how I feel about the problem", "I need this from the solution".

To help improve meetings, participants were trained in the use of a small group discussion process called the nominal group technique. This method focuses the attention of a group of people on a single problem phrased as a question. The technique brings out their best thinking on the problem and assures that each one in the group can present several thoughts without anyone's ideas being criticized by the group.

In another of the sessions on how to use projection equipment, a simple rule was offered, which, if followed, would make many a public meeting more illuminating. It is called the 2 - 6 rule, and it applies to where you put the screen and where you put the people. The first row should be no closer than two times the screen width and the last row should be no further than six times the screen width.



Virginia Prentice, Research Advisory Board member and Director of the Sigurd Olson Institute welcomes participants.

Throughout the day, very practical tips such as these were given. In evaluating the workshop, participants and program sponsors felt the program objectives and personal needs were well met. As a follow-up to the day's activities, participants were asked if they would like additional training in small group involvement and public communication techniques. Based on their responses, additional information and program specific advice are being sent their way.

The workshop was sponsored by the Sigurd Olson Institute of Northland College in Ashland, Wisconsin, with funding provided by Title I of the United States Higher Education Act of 1965. If additional information is desired, please write Marina Lachecki Herman at the Institute, or call (715) 682-4531, Ext. 258.

MIREX

On March 31, New York State's Environmental Conservation Commissioner, Peter A.A. Berle, lifted the ban on possession of sports caught fish from Lake Ontario and the Niagara and St. Lawrence rivers.

The ban was imposed in September, 1976, because of the health threat posed by chemical pollutants, primarily mirex, in the lake and rivers.

Commissioner Berle said he was lifting the ban for the following reasons:

The Department has changed its fish stocking program so that the big fish species with high contamination levels are no longer there; the Department is not stocking them.

Recent studies show certain preparation methods (described in New York Department of Environmental Conservation news release of March 31, 1978 "Berle lifts Mirex Possession Ban") can drastically reduce the amount of contaminants in fish to be eaten.

A uniform regulation and enforcement policy is necessary on the New York and Canadian sides of the waters.

In repealing the fish possession ban, however, Commissioner Berle stated that the Health Department's (N.Y. State) advisory against human consumption of fish, which exceed federally set levels, remains in effect. The federal actionable level is set at 0.1 part per million for mirex in fish for interstate commerce. A ban still exists on the possession of commercially caught fish.

BOOKSHELF

Interested in reading the Clean Water Act to see how it differs from PL 92-500, the 1972 Amendments to the Federal Water Pollution Control Act? Write to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 and ask for Serial Number 95-12 "The Clean Water Act showing changes made by the 1977 Amendments." The cost is \$2.40.

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January's *Water and Wastes Engineering* has a useful article "Legislation and regulation: What's new with PL 92-500" (pages 17 - 32). The article provides a summary of the changes and presents "several diverse views of what's happening with disinfection, hazardous wastes, national priorities, and changing requirements" under the Clean Water Act.

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University of Wisconsin Sea Grant and the UW-Extension have produced a short series of historical "fact sheets" of possible interest to our teacher readers. One of their "Tales of the Great Lakes" appears in this *Focus*. Each Tale has a small illustration. For details write to the Sea Grant office: 1800 University Avenue, Madison, Wisconsin 53706.

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The Environmental Protection Agency's office of Toxic Substances (Office of Industry Assistance, 401 M Street, S.W., Washington, D.C.) is offering a guide to chemical firms to help them to figure out their reporting requirements, learn proper procedures and whom to ask if more information is needed. Importers too will find the manual helpful.

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This spring and summer if you visit a state or provincial park around the Great Lakes, you may receive a copy of a new PLUARG brochure, "The Great Lakes, do we take them for granted?" If you are a *Focus* reader, you know more about land use problems and PLUARG than the average citizen, so pass it on. Pass on your knowledge, your interest, and, should you receive one, the brochure, to someone else!

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"National Water Quality Goals Cannot Be Attained Without More Attention to Pollution From Diffused or 'Nonpoint' Sources" is now available from the General Accounting Office, Distribution Section, Room 4522, 441 G Steet, N.W., Washington, D.C. 20545. The cost is \$1.00.

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A new booklet, *Your Role in the Act: A citizens' Guide to the Wisconsin Environmental Policy Act (WEPA)*, explains in practical terms how citizens can use and comment on environmental impact statements (EIS), testify at an EIS hearing, or just read an impact statement. The guide is written with the citizen in mind, but local officials, teachers and students will also find it useful. It is available free from county extension offices and district offices of the Department of Natural Resources and the Department of Transportation. Or write to the State WEPA Coordinator, Rm. B-130, One West Wilson St., Madison, WI 53702.

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New York readers might wish to request the *1977 New York Environmental Voter's Guide* from the Environmental Planning Lobby, 109 State Street, Albany, New York 12207.

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"Don't Bug Me" is a guide for parents and their children about the purchase and safe use of pesticides. To obtain a copy, write to the EPA Public Awareness Division, 26 Federal Plaza, New York, N.Y. 10007.

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"Wetlands our vanishing heritage" is a single page brochure published by the East Michigan Environmental Action Council (1 Northfield Plaza, Troy, Michigan 48098). The brochure outlines the benefits of wetlands and what individuals can do to retain the remaining wetland areas.

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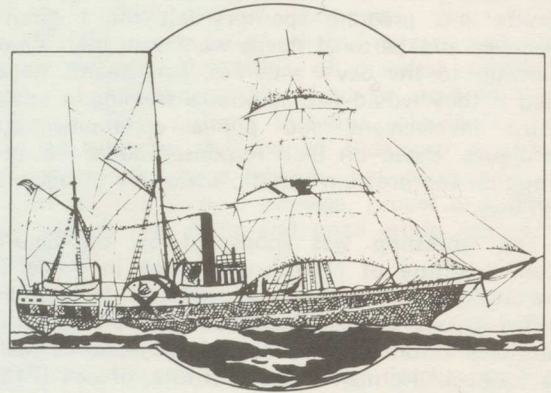
The *Eighth Annual Report* of the Presidents Council on Environmental Quality is now available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The stock number for the 445-page report is SN 041-011-00035-1. Its cost is \$4.25.

THE MATRIARCH OF MISERY BAY

Contrary to the myths of schoolbooks, the first iron vessel in the U.S. Navy was not the MONITOR of Civil War fame. It was the U.S.S. MICHIGAN, launched in 1843.

Built as a gunboat with both sails and steam, the MICHIGAN spent her entire life in the Great Lakes. Among her other duties she stood guard over a prison for Confederate soldiers in Sandusky Bay. Then for 40 years she served as a navy training vessel.

tales of the great lakes



When she broke a cylinder rod, at the age of 70, the MICHIGAN's friends assumed the U.S. Navy would give her rightful honor. Instead she was left to rot on a mudbank in Lake Erie's Misery Bay.

After 25 years of neglect, all that could be saved was her beautiful raking bow, which is now mounted in a park overlooking the bay in Erie, Pennsylvania. (University of Wisconsin Sea Grant College Program and UW-Extension.)

THINGS TO SEE

Chemical pollution of Lake Ontario is the topic of a recently released 26 minute, 16 mm color film, "The Cry of the Gull". The endangered herring gull colony on Lake Ontario is compared to a healthy colony on Lake Huron. The film, through excellent wildlife photography, shows viewers the contrasting life cycles of birds in the two colonies and associates toxic environmental contaminants with impaired reproductive patterns. Inquiries about availability and costs should be sent to: G. Montero/D. Fulton, 93 Pears Avenue, Toronto, Ontario M5R 1S9.

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The film "The Subject is Water" focuses on how the United States Geological Survey monitors and evaluates water resources through its nationwide network and shows how such data and research are used by local, state and federal agencies to help find solutions to complex water problems. Loan copies are available from: USGS, Branch of Visual Services, 303 National Center, Reston, Virginia 22092.

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A display unit showing land use activities relationship to Great Lakes pollution has been developed for PLUARG. There is also a slide/tape show on the same topic. It is about 15 minutes long. To request scheduling of either or both, write to the editor.



PLUARG Display

IMPRESSIONS OF IAGLR – 1978

The International Association for Great Lakes Research held its annual conference at the University of Windsor during the second week of May. Rather than list the sessions and types of papers which were given, *Focus* is presenting impressions of the conference from the viewpoints of some of the attendees.

It was a good, diversified program and was well attended. Most presentations were excellent from the standpoint of delivery. However, some of the data presented were very detailed and sometimes there was not enough interpretation for the average professional to assimilate for practical use later. From a multidisciplinary standpoint, I hope that next year we will have more general interpretations expressed so that papers will be of more value to disciplines besides that of each individual presenter. (Water Resources Planner)

Scientists who are new to the Great Lakes find IAGLR an opportunity to explore quickly the knowledge from 300,000 sq. miles of the Great Lakes Basin; to hear about the very broadest range of science encompassed in a conference that addresses water resource management. It was interesting this week to watch "old hands" vying with each other to produce new ideas and new insights into the Great Lakes System.

I sensed a deep concern amongst the scientific community to make the public and the government policy makers understand the depth and limits of our understanding of the lakes, which aspects require our best judgement (but no absolute assurance we're right), and the point at which people or society and its institutions have important decisions to make about the future of these lakes. (Research Manager)

IAGLR proved to be of great value to the several librarians who attended. Among the reasons for this were: we could finally put some faces to the names we constantly deal with; the volume of papers presented made it possible to find out something about many aspects of the lakes; the papers presented by information specialists were, of course, very useful in learning about developments in the library field. Finally, the conference gave us an idea of what researchers throughout the basin are doing. That helps us to spot trends and enables us to anticipate needs in the library.

The IAGLR conference has one drawback, namely, the lack of proceedings. While the reasons for this are valid – for example, many presentations are spontaneous, it's very awkward to keep explaining to your users, "I'm sorry – there are no proceedings."

One highlight of the conference was the presentation by Lydia Dotto in which she stressed the need for better communication between scientists and the public. Having acted as an interpreter many times, I can only re-emphasize her point. (Librarian)

Is there a place for non-governmental organizations and individuals in the formation of public policy on matters concerning the Great Lakes? What happened at IAGLR during discussion of the ideas of rehabilitation and restoration as an objective for the Great Lakes provides a yes answer to the question. First some history . . .

A 1973 report of the Canada-United States University Seminar on improving the management of the Great Lakes pointed to the unrecognized relationship between fisheries and other Great Lakes management tasks as one of many problems. Leaning upon this report, Professor Henry Regier (University of Toronto) wrote to the Great Lakes Fishery Commission (GLFC) requesting that a committee be established to examine the relationship of fisheries to other Great Lakes matters. During the 1976-77 Seminar, George Francis (Waterloo University) and Henry Regier introduced the concepts of rehabilitation and restoration of the Great Lakes. A feasibility examination of the ideas was undertaken with the GLFC. . . .

The reports made to IAGLR during the Rehabilitation and Restoration Session were exciting, not only for their content, but also because existing knowledge and research underway made new sense when placed in the context of a restoration and rehabilitation objective. The efforts now underway surely will change the fundamental goals and procedural approaches to the improved management of the Great Lakes.

These concepts are such that government alone cannot readily achieve their implementation in the

context of international agreements. The operational flexibility of non-governmental organizations and interested individuals could enable them to act as representatives of rehabilitation and restoration objectives to bring an earlier awareness on the part of decision makers of the usefulness of these concepts in preserving the Great Lakes Resources. (University Professor)

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FLUORIDE

During debates in the House of Commons on March 14, James Hugh Faulkner, Canadian Minister of Indian Affairs and Northern Development, told members of the House that after discussions with Monique Begin, Minister of Health and Welfare, they were prepared to proceed with epidemiological studies of fluoride poisoning on the St. Regis Indian Reserve on Cornwall Island in the St. Lawrence River.

Senior members of the Department of Health and Welfare met with the St. Regis Band Council on March 21 to define the scope of the study and

to determine whether it should go beyond the question of fluorosis. The Government had two stipulations before it would fund the study:

1. That the study cover more than the fluoride problem. It should cover a myriad of toxic and hazardous substances which are carried to the Reserve via the St. Lawrence River.
2. The Federal Government must be satisfied with the study design.

The Band has suggested that Dr. Bertrand Carnow of the University of Illinois at Chicago perform the study. Dr. Bertrand has submitted his study proposal. Once it is reviewed by the Government's scientific experts, another meeting will be scheduled.

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FOR ADDITIONAL COPIES

Write to Patricia Bonner - Editor, Great Lakes Focus, IJC Regional Office, 100 Ouellette Avenue, Windsor, Ontario, Canada N9A 6T3.

GREAT LAKES
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